

ZARETSKIY, Ye.M.; KIREYEVA, A.F.

Rapid method for determining the tendency of duraluminum-type alloys toward corrosion cracking. Zav. lab. 29
no.9:1098-1101 '63. (MIRA 17:1)

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8

ZARETSKIY, Ye.M., kand.tekhn.nauk; PAVLOVSKAYA, T.G., inzh.

Hard anodizing of sintered aluminum powder. Vest.mashinostr. 43 no.11:
21-22 N '63. (MIRA 17:2)

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8"

ZARETSKIY, Ye.M.

Concerning the article by V.V.Romanov "Evaluating the resistance
of metals to corrosive cracking." Zav.lab. 27 no.11:1378-1379 '61.
(MIRKA 14:10)

(Metals--Corrosion) (Romanov, V.V.)

ZARETSKIY, Ye.M.

Investigating the anodization of ML5 magnesium alloys. Trudy
MIKHM 22:190-207 '60.
(Magnesium alloys) (Protective coatings)
(MIRA 14:1)

ROMANOV, Vsevolod Vladimirovich; MODESTOVA, V.N., kand.tekhn.nauk,
retsenzent; ZABETSKIY, Ye.M., kand.tekhn.nauk, retsenzent;
SLOMYANSKAYA-MALKINA, F.B., kand.tekhn.nauk, red. [deceased];
TAIROVA, A.L., red.izd-va; SOROKINA, G.Ye., tekhn.red.

[Stress corrosion cracking of metals] Korroziionnoe rastreski-
vanie metallov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.
lit-ry, 1960. 177 p. (MIRA 13:5)
(Corrosion and anticorrosives)

ZARETSKIY, Ye. M.

SHREYDER, Aleksandr Viktorovich, kand.tekhn.nauk; UDAL'TSOV, A.N., glavnnyy
red.; ZARETSKIY, Ye.M., kand.tekhn.nauk, red.

[Controlling corrosive disintegration of brass pipes] Bor'ba
korroziionnym rastreskivaniem latunnykh truboprovodov. Moskva,
In-t tekhniko-ekon. inform., 1956. 19 p. (Informatsiya o nauchno-
issledovatel'skikh rabotakh. Tema 23, no. I-56-5) (MIRA 11:2)
(Brass--Corrosion) (Pipe)

"APPROVED FOR RELEASE: 09/19/2001

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CIA-RDP86-00513R001963820013-8"

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8

ZARETSKIY, Ye. M.

"The Effect of Deformation on the Potential of Metals," Zhurnal Prikladnoy
Khimii, Academy of Sciences USSR, Moscow, Vol. 24, No. 6, 1951.

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8"

ZARETSKIY, Ye.M., kandidat tekhnicheskikh nauk.

Electrolytic polishing and correcting an electrolyte containing
chromium. Tekst.prom. 14 no.10:36-38 0 '54. (MLRA 7:10)
(Electrolysis) (Textile machinery--Maintenance and repair)

ZARETSKIY, Ye. M.

(1)

"Influence of Deformation on the Potentials of Metals." E. M. Zaretskiy (Zhur. Priklad. Khim., 1951, 24, (6), 614-623). [In Russian]. Z. shows that from thermodynamic principles the change in potential (ϵ) produced by application of a stress p to a metal is given by: $\epsilon = -(p^2 V/2EnF) + T \cdot \frac{de}{dT}$, where V is the vol. of the crystal, E the modulus of elasticity, n the valency, F Faraday's number, and T the temp.; the second term may be neglected, since the thermal effect is comparatively small. For 1 g.-equivalent Mg, and $p = 17$ kg./mm.² (the tensile strength), this gives $\epsilon = 2.5$ mV. Z. has studied the effect of strain on the electrode potentials (E_{ag}) of the metals and alloys previously used in investigating the effect of deformation on corrosion (cf. Z., ibid., 1951, 24, 477; M.A., 81, 050). Specimens measuring $160 \times 15 \times 1$ mm. were bent by applying known bending moments from which the stresses could be calculated. The calculated values of ϵ were several times less than the experimental values. With Mg and Mg alloys MA1 and MA3, E_{ag} in 0.1M-NaCl soln. becomes 8-17 mV. more negative on ex-

tension or compression. Changes to more negative values were also observed with Al in 0.3M-HCl ($\epsilon = 1.5$ mV.), Zn in 0.0125M-H₂SO₄ (-35 mV.), Cu in 0.9M-H₂SO₄, 5:1 steel in 1.5M-H₂SO₄. The results are given as curves of E_{ag} plotted against time for undeformed and deformed specimens; in general, $|e|$ decreased with increasing time. However, deformed Cu in H₂SO₄ was initially more positive than undeformed Cu, but the two potentials rapidly approached one another, and after ~1 hr. deformed Cu became the more negative. Anodic and cathodic polarization curves were obtained for Mg and MA3 in 0.1M-NaCl. Deformed Mg was cathodically polarized to a greater degree, and anodically to a lesser degree, than undeformed Mg, but at c.d. of ~0.6 m.amp./cm.² there was less difference between the curves. The corrosion current obtained from the cell Mg[0.1M-NaCl]Mg increased when the anode was deformed (tension or compression), and decreased on deformation of the cathode, similar results being obtained on using alloy MA3 instead of Mg. Simultaneous deformation of both anode and cathode in the cell alloy MA1[0.005M-H₂SO₄]alloy MA1 increased the corrosion current.—G. V. E. T.

ZARETSKY, E. M.

Metallurgical Abstracts
July 1954
Corrosion and Related
Phenomena

*Effect of Deformation on the Corrosion of Metals. E. M.

Zaretsky. (Zhur. Priklad. Khim., 1951, 24, (5), 477-484).
[In Russian] Z. studied the effect of residual deformation on the corrosion of Cu (Ni 0.09, As 0.04, Sb 0.02%), Zn (S 0.15, Cd 0.04, Fe 0.03%), Al (Si 0.20, Fe 0.18, Mn <0.30, Cu <0.03%), 0.1% C steel No. 10-20, Mg, and three Mg-alloys: MA-1 (1.05% Mn), MA-3 (Al 5.62, Zn 0.06, Mn 0.33, Ni 0.7%), and MA-8 (Mn 1.67, Cd 0.35, Al 0.15%). All the materials were used in the rolled condition, and the corrosion was investigated by measuring the loss in weight and reduction in U.T.S. Deformations caused by stresses of up to 90% of σ_u (the U.T.S.) had no effect on the corrosion of MA-1 in 0.1M-NaCl buffered to pH 8.8 with 0.01M-NaH₂PO₄ and 0.05M-NaOH (24-hr. tests), but in 2-year atmospheric exposure tests the corrosion was a min. for deformations caused by stresses of ~0.4 σ_u , and OVR owing to the reduction in the area of the cathode regions. In 0.003M-H₂SO₄ the corrosion of Cu was independent of the deformation. The corrosion of the steel in 1.5M-H₂SO₄ increased with increasing deformation.—G. V. E. T.

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8

ZARETSKIY, Ye. M.

"On the Article by Zorin, V., "The Process of Corrosion
under Dripping".

Zhur. Fiz. Khim. 13. No. 7, 1939

Report U-1615, 3 Jan. 1939

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8"

KLINOV, I.Ya., prof., doktor tekhn. nauk; ZARETSKIY, Ye.M., dotsent, kand.
tekhn. nauk; SALEM, R.R., inzh.

Effect of the construction characteristics of installations and
equipment on their resistance to corrosion. Khim. mash. 3 no.3:
3-6 My-Je '59. (MIRA 12:12)
(Chemical engineering--Equipment and supplies)
(Corrosion and anticorrosives)

SALENI, R.R., inzh., ZARETSKIY, Ye. M., kand.tekhn.nauk; KLINOV, I. Ya.,
doktor tekhn.nauk prof.

Particular features of steel corrosion in crevices. Khim.mash.
no.2:30-33 Mr-Ap '60. (MIRAL3:6)
(Steel--Corrosion)

ZARETSKII, E. M.

Influence of Deformation on the Corrosion of Metals. (In Russian.) E. M. Zaretskii, Zhurnal Prikladnoi Khimii, v. 34, May 1961, p. 477-481.

See abstracts & parts I and II, Chemical Age; items 344-3 and 363-2, 1961.

(R general, R11, 424, Al, Zn, Cu, ST)

Immediate Source Clipping

183T35

ZARETSKIY, Ye. M.

May 51

USSR/Chemistry - Corrosion

"Effect of Deformation on the Corrosion of Metals,"
Ye. M. Zaretskiy

"Zhur Prik Khim" Vol XXIV, No 5, pp 477-484

Measured corrosion under increasing deformation of
Mg alloys MA-1, MA-3, MA-8 in NaCl and under atm
conditions, of Al in HCl and NaCl, Zn in H₂SO₄, Cu
in (NH₄)₂S₂O₈, and low-carbon steel in different
concns of H₂SO₄. With increased deformation, cor-
rosion of Mg alloys and Cu stays const or decreases,
that of Al, Zn, steel increases.

183T35

ZARETSKIY, YE. N.

PA 52T12

USSR/Chemistry - Magnesium Alloys
Chemistry - Disintegration Oct 1947

"Corrosive Disintegration of Electron AZM in Various
Media," Ye. N. Zaretskiy, All-Union Sci Res Inst
Aviation Materials, 3 pp

"Dok Akad Nauk SSSR" Vol LVIII, No 1

Studies tendency toward corrosive disintegration of
rolled magnesium alloy AZM (6% Al, 1% Zn, 0.5% Mn) in
solution of sulphuric acid, sodium carbonate, and
mixtures of sodium chloride and potassium bichromate,
using forms 160 x 15 x 1 mm cut from a sheet of the
metal. Submitted by P. A. Rebinder, 24 Mar 1947.

FDB

52T12

DYATLOVA, V.N.; ZARETSKIY, Ye.M., kand. tekhn. nauk, retsenzent,
KUBAREV, V.I., inzh., red.

[Corrosion resistance of metals and alloys; a handbook]
Korrozionaia stoikost' metallov i splavov; spravochnik.
Izd.2., perer. i dop. Moskva, Izd-vo "Mashinostroenie,"
1964. 350 p. (MIRA 17:5)

ZARETSKIY, Ye.Ye., kand.okon.nauk., SOMINSKIY, V.S., kand.tekhn.nauk., red.;
ILLYUMINARSKIY, K.L., red.; SKVIRSKAYA, R.I. tekhn.red.

[Economic aspects of the machinery manufacturing industry] Voprosy
Voprosy ekonomiki mashinostroitel'nogo proizvodstva. [Leningrad]
Lenizdat, 1958. 298 p.
(Machinery industry) (MIRA 11:9)

ZARETSKIY, Ye.Ye.

Economic calculations of the dynamics of the growth of industrial production, labor productivity, and number of workers. Trudy LPI no.186:7-17 '56. (MLRA 10:7)
(Machinery industry) (Productivity accounting)

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8

ZARETSKIY, Yu.K.

Calculations for a cylinder of frozen rock based on limiting
deformations. Osn., fund. i mekh. grun. 3 no.4:25-27 '61.

(MIRA 14:8)

(Underground construction) (Frozen ground)

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8"

ZARETSKIY, Yu.K., inzh.

Theoretical basis of geometrical analysis in open pit mining.
Nauch. dokl. vys. shkoly; gor. dele no.1:27-32 '59.
(MIRA 12:5)

1. Predstavlena kafedroy otkrytykh rebot Moskovskogo gornogo instituta
im. I.V. Stalina.
(Strip mining) (Mine surveying)

TSYTOVICH, N. A.; ZARETSKIY, Yu. K.

"Consideration of heterogeneity and non-linear character in analysis of bed creep."

report submitted for Intl Symp on Rheology & Soil Mechanics, Grenoble, France,
1-8 Apr 64.

ZARETSKIY, Yu.K.

Calculating the thickness of the enclosing frozen ground
when drilling shafts using the freezing method. Merzl. issl.
no.3:251-266 '63. (MIRA 17:6)

VYALOV, Sergey Stepanovich, prof., doktor tekhn. nauk; GMOSHINSKIY,
Vsevolod Georgiyevich; GORODETSKIY, Stanislav Eduardovich;
GRIGOR'YEVA, Vera Grigor'yevna; ZAIETSKIY, Yuriy Konstantinovich;
PEKARSKAYA, Nina Kazimirovna; SHUSHERINA, Yelizaveta Petrovna;
SANOVICH-OSIPOV, P.O., red.; DOROKHINA, I.N., tekhn. red.

[Stability and creep of frozen ground and calculations of ice
walls] Prochnost' i polzuchest' merzlykh gruntov i raschety
ledogruntovykh ograzhdenii. Moskva, Izd-vo Akad. nauk SSSR,
1962. (MIA 15:9)

(Frozen ground)

EXCERPTA MEDICA Sec. 6 Vol. 11/11 Nov. 57

ZARETYKAYA I. V.

6976. ZARETYKAYA I. V., DUBOVYI E. D. and TSUVERKALOV D. A. Dept. of Biochem., Odessa Med. Inst., Odessa. • Nitrogen and protein composition of the blood of patients with polycythaemia treated with radioactive phosphorus (Russian text) VRAC. DELO 1956, 10 (1015-1018)

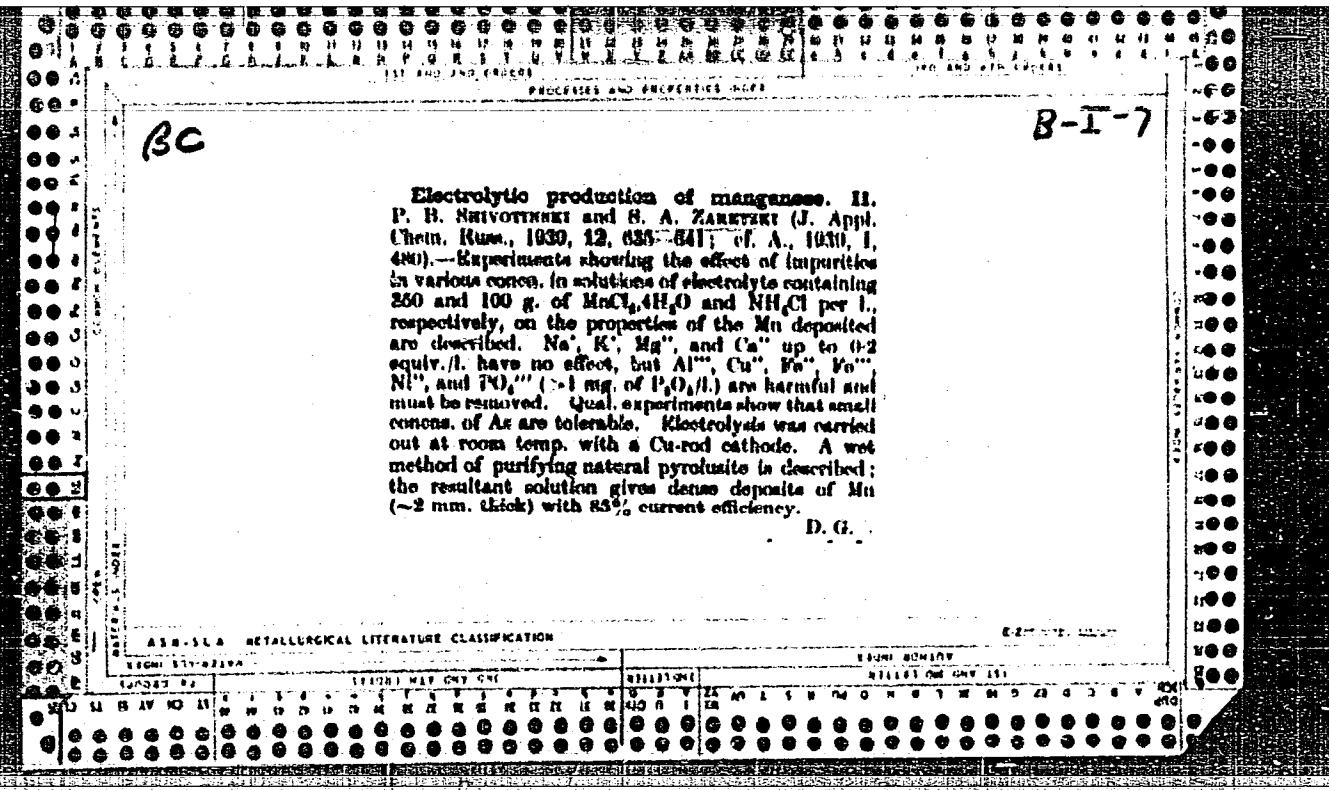
Blood nitrogen and protein values in 9 patients with polycythaemia vera treated orally with P³² (as Na₂HPo₄) were studied. The disease had been present for periods from 3 months to 17 yr. The total quantity of P³² varied from 6 to 7 mc. and side-effects were not noted. In the majority of cases the total serum nitrogen, the residual nitrogen and total protein were initially normal or low. One patient was noted to have hyperazotaemia and hyperproteinaemia. After treatment the total blood nitrogen significantly increased in 8 patients and was lowered in the one patient who had shown initial hyperazotaemia. Later determinations showed a further increase in the serum N and proteins and the morphological picture of the blood remained

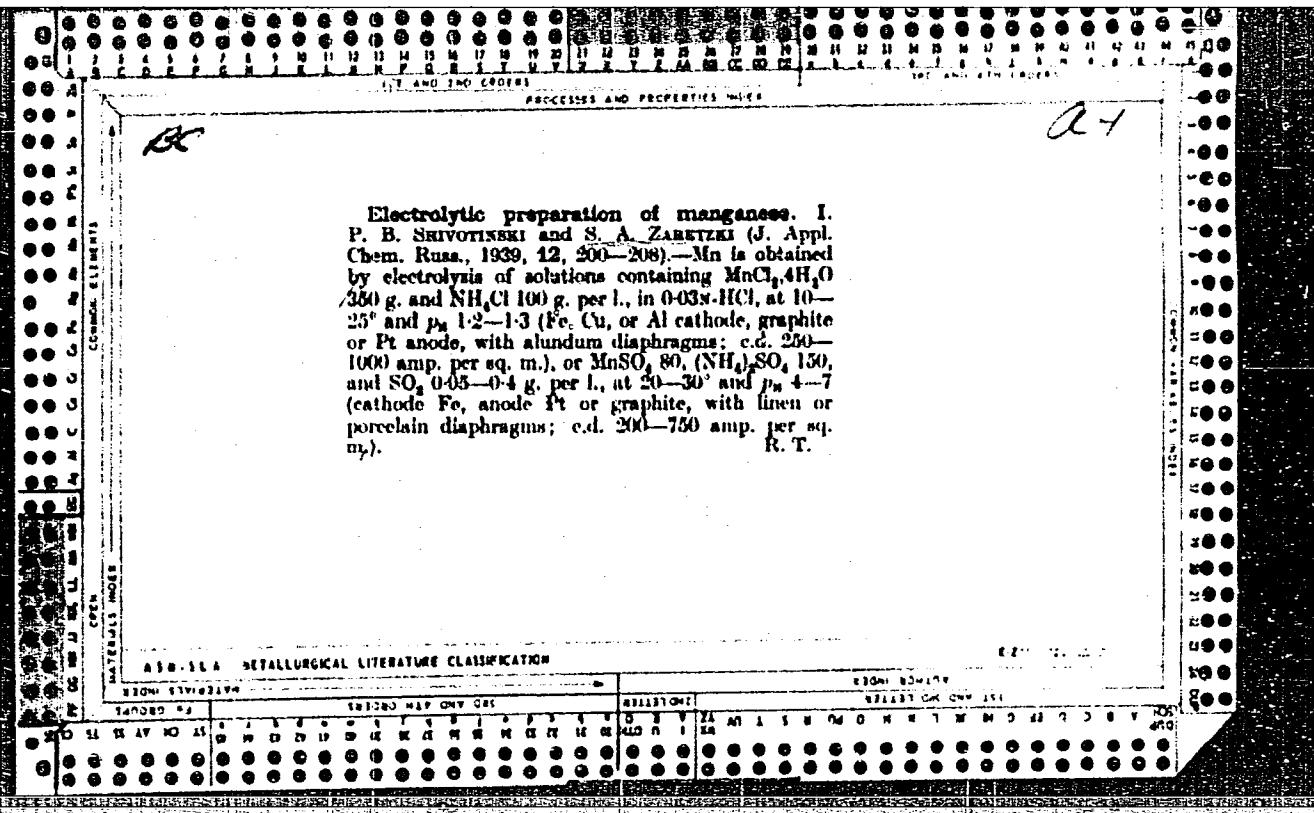
6976

CONT.

unchanged at this stage. Changes in blood nitrogen and protein levels of the blood during treatment with P³² thus occur earlier than quantitative changes in the red cell fraction of the blood of patients with polycythaemia vera. It is thus possible by means of P³² to destroy hyperplastic blood tissues and produce an accumulation of the disintegration products (proteins, polypeptides, amino-acids) in the body.

Guseva - Moscow





ZAREV, Dimitur, inzh.

To prepare for civilian defense means we strengthen the peace.
Durnomebel prom 7 no.4:31-32 Jl-Ag '64.

1. Committee of Forestry and Forest Industry.

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8

ZAREV, M.A. (g.Simferopol')

Experimental problems demonstrating Lenz law. Fiz. v shkole 16
no.2: Mr-Ap '56. (Electromotive force) (MLRA 9:6)

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8"

ZAREV, M.A. (Simferopol')

Practical work in electrical engineering in the tenth grade.
Politekh.obuch. no.6:32-35 Je '57. (MIRA 12:4)
(Electric meters)

ZAREV, M.A. (Simferopol')

Dependence of the intensity of alternating current on the
kind of load. Fiz. v shkole 21 no.1:67 Ja-F '61. (MLBA 14:9)
(Electricity--Experiments)

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8

ZAREV, M.A. (g. Simferopol')

Automatic circuit breaker. Politekh. obuch. no. 8:67-68 Ag '58.
(MISA 11:9)

(Electric circuit breakers)

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CIA-RDP86-00513R001963820013-8"

BALABANSKI, L.; STOILOV, Zh.; ZAREV, V.; MERETEV, At.

Hypertension in some selected settlements of the Pleven District.
Izv Inst khrenene BAN 3:135-143 '64.

ZAREV, V.; STOILOV, Zh.

Incidence range of the liver and gallbladder diseases in the
Pleven District. Izv Inst khranene BAN 3:175-181 '64.

STOLOV, Zh.; ZAREV, V.; GRUNCHAROV, V.

Incidence range of gastrointestinal diseases in a section of
the population in the Pleven District. Izv Inst khranene BAN
3:183-192 '64.

TASHEV, T.; GRUNCHAROV, V.; ZAREV, V.

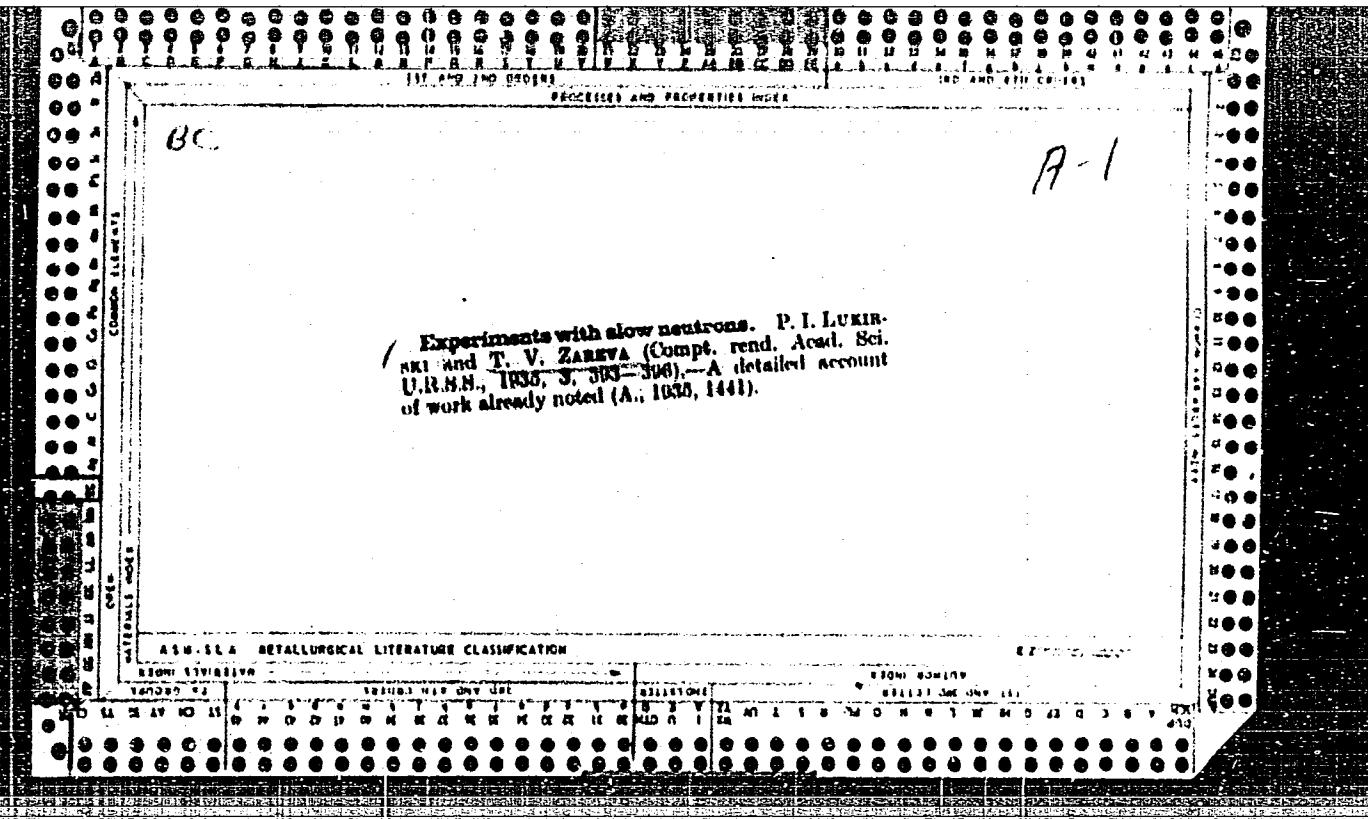
Incidence range and the clinical forms of obesity. Izv Inst
khraneniya BAN 3:153-163 '64.

NEDKOVA-BRATANOVA, N.; MIADNOVA, Z.; ZAREV, V.

Tolerance and therapeutic effects of tomatoes in gastro-intestinal and biliary diseases. Suvr. med. (Sofia) 15 no.7:25-32 '64

Slow neutrons. P. L. Lukash and J. Zarrea. *Nature* 138, 681 (1936); cf. C. R. 30, 1651. Absorption of neutrons increases and velocity decreases in cold paraffin. The effective cross section of neutrons found was 10^{-14} sq. cm.

From M. Evans



PETROV, V.M.; ZAREVICH, I.P.

Dike intrusions in the Unkurtash ore deposit and their structural characteristics. Uzb. geol. zhur. no.6:58-64 '60. (MIRA 14:1)

1. Glavgeologiya UzSSR.
(Uzbekistan--Dikes (Geology))

S/081/62/000/002/025/107
B151/B108

AUTHORS: Petrov, V. M., Zarevich, I. P.

TITLE: Rhenium in the molybdenites of the Pskem-Chatkal' region

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1962, 127, abstract
2G126 (Uzb. geol. zh., no. 3, 1961, 33 - 38)

TEXT: The results of chemical determination of Re in 21 monomineral samples of molybdenites from 10 ore locations of various formations and types are given. The Re content varies between 0.0008 % in quartz-molybdenite ores and 0.072 % in skarn ores. The Re content within the area of one ore location, even in the molybdenites of different generations, varies within one order. Among the skarn ores the association of richer Re molybdenites with chalcopyrite is characteristic. On the whole, the Pskem-Chatkal' ore region is put by the authors among the rich Re provinces. [Abstracter's note:
Complete translation.] ✓

Card 1/1

Country	: USSR	F
Category	Microbiology. Microbes Pathogenic For Man and Animals.	
	Aerobic Facult.	
Abs. Jour	Ref Zhur-Biol., No 23, 1958, No 103864	
Author	Gorlov, S. V.; <u>Zarevich, T.V.</u> ; Gol'tsova, T.I.; Khokhryakova	
Institut.		
Title	Study of the Viability of Anthrax Spores Exposed to Freezing	
Orig Pub.	Inform. byul. biol. prom-sti, 1957, No 2, 3-5	
Abstract	The physical, cultural-morphological, virulent properties, reactivity and viability of spores of 26 different series of anthrax vaccines were studied after being frozen once or twice at -42°-44° for three days with subsequent thawing at 18°. It was established that after freezing the physical properties of the anthrax vaccines are maintained, but the viability of the spores is reduced considerably. The virulence and reactivity are altered.—V. Ya. Boyarskaya	
	*I.A., Kokoreva V.B.	
Card:	1/1	

ZAREVITCH, T. S.

"Recherches dans le domaine de la synthese dans la serie des derives du 7'-oxycoumarine".
Nesmejanov, A. N., Vompe, A. F., Zarevitch, T. S., Smoline, D. D. (p. 2767).

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii). 1937, Volume 7, No. 22.

SOBOTOVICH, Ivan Dmitriyevich; SOBOTOVICH, Yevdokiya Pavlovna;
ZAREYEV, G.S., retsenzent; FEDYAYEVA, N.A., red.izd-va;
BODROVA, V.A., tekhn.red.

[Down the Moscow canal; a guidebook] Po kanalu imeni Moskvy;
putevoditel'. Moskva, Izd-vo "Rechnoi transport," 1959. 86 p.
(Moscow Canal--Guidebooks) (MIRA 12:10)

ZAREZAKINA, A.K.

CHAYKIN, P.I.; GUMBAR, K.K.; ZAREZAKINA, A.K.

Emanation determination of radium isotopes in the presence of
iron, calcium, and other elements. Inform. sbor. VSEGEI no.4:
138-139 '56.

(Radium--Isotopes)

(MLRA 10:4)

SOV/107-59-2-6/55

9(2)

AUTHORS: Lyambakh, R. and Zarezankov, G., Engineers
TITLE: The Instruments Are in Control (Pribory upravlyayut)
PERIODICAL: Radio, 1959, Nr 2, pp 8-9 and p 11 (USSR)

ABSTRACT: The article deals with the future introduction of electronic devices and computers in the ferrous metal industry. Recently the Tsentral'naya laboratoriya avtomatiki (Central Laboratory of Automation) developed and introduced a series of electronic devices in one of the biggest metallurgic combines, which operates an automatical rolling mill using photoelectric relay switches, electronic computers, perforators etc. The schedule of the bar rolling process is recorded on a disc-type perforation card in the form of apertures. The quantity of the radial aperture rows is equal to the maximum number of times the bar is passed during the rolling process. The rolling process being completed, radioelectronic devices measure automatically the thickness and width of the sheet bars and.

Card 1/2

'The Instruments Are in Control

SOV/107-59-2-6/55

the diameter and gage of the wire. For measuring the thickness of sheet bars radioactive or roentgen micrometers are used. The measuring principle is based on the adsorption of radioactive and roentgen radiations by the thickness of the material to be measured. The measuring devices are automatic and noncontact, electronic correctors eliminate errors. The use of non-contact measuring devices ensures a continuous, i.e. uninterrupted rolling process. There are 2 diagrams and 2 figures.

Card 2/2

18 (3)

SOV/112-57-5-10645

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr 5, p 156 (USSR)

AUTHOR: Zarezankov, G. Kh., Krasheninnikova, A. L.

TITLE: Automatic Monitoring of Metal Dimensions in the Process of Rolling
(Avtomatushkiy kontrol' razmprov metalla v protsesse prokatki)

PERIODICAL: Byul. Tsentr. in-ta inform. M-va chernoy metallurgii, 1956,
Nr 4, pp 50-55

ABSTRACT: Three photoelectronic methods for size measurements are described:

(1) Metal band width is measured as the difference of its two edge positions, which are determined by two photoelectronic follower systems whose resistor pickups are connected to the size recorder. Glow of the hot metal or illumination of the cold metal is used. The error is under +2.5 mm with a width of 1,000 mm. (2) The body being measured and a movable diaphragm are placed in two luminous fluxes. Unobstructed parts of the luminous fluxes are balanced by the diaphragm movement controlled by a flux-difference amplifier. Use of

Card 1/2

ZAREZANKOV, Georgiy Khristovich; GRUZIN, V.I., red.; GOLYATKINA,
A.G., red.izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Photoelectronic instruments for the automatic measurement
control of rolled products] Fotoelektronnye pribory avto-
maticseskogo kontrolia razmerov prokata. Moskva, Metallurg-
izdat, 1962. 151 p. (MIRA 16:5)
(Rolling (Metalwork))
(Photoelectric measurements)

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8

ZAREZANKOV, G. Kh., inzh.

Photoelectron instruments for measuring diameters of milled wires.
Biul. TSNIIIGEM no.16:26-32 '57. (MIRA 11:5)
(Photoelectric measurements) (Wire)

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8"

SOV/119-58-1c-2/19

AUTHORS: Zaretskov, G. Kh., Engineer, Lyubtakh, R. V., Engineer

TITLE: Apparatus for Visually Controlling the Operation of a Follower
(Pribor dlya vizual'nogo kontrolya raboty sledyashchikh sistem)

PERIODICAL: Priborostroyeniye, 1958, Nr 10, pp 5-7 (USSR)

ABSTRACT: The Central Laboratory for Automation of the Trust "Energochemet" devised an apparatus by means of which the operation of the follower can be controlled even across long distances. This apparatus consists of a picture tube of the type ELT, a rectifier unit with the valve 2Ts2s for feeding ELT, an RC circuit for synchronizing the horizontal deflection, a balanced phase-sensitive amplifier and diode limitor; both incorporate double triodes of the type 6A9. The unbalance voltage of the follower is driven to the input of the apparatus. The position of the follower is represented on the picture tube in the form of a closed curve, with the horizontal lines representing the position the follower should have (desired position), whereas the curve peaks give the actual position

Card 1/2

SOV/119-58-10-2/19

Apparatus for Visually Controlling the Operation of a Follower

of the follower with respect to the pre-set level (actual position).

If, for instance, only a straight line is shown on the picture tube it means that the executive organ of the follower has exactly the pre-set position. A direct error reading can be compiled for the other shapes of curves, and the corresponding commands to the executive organ of the follower can be prepared.

This apparatus was first used to control the follower carrying out the automatic pre-set control of the pressure mechanisms of the "Iscomill" Nr 2 at the Magnitogorsk Metallurgical Kombinat. This apparatus proved to operate excellently. There are 3 figures and 1 table.

Card 2/2

ZAREZANKOV, G.Kh.; LYAMBAKH, R.V.

Instrument for visual control of operations of servosystems.
Priborostroenie no.10:5-7 O '58. (MIRA 11:10)
(Electronic control)

LYAMBAKH, R.V.; ZAREZANKOV, G.Kh.; INDENBAUM, A.G.; AGARONOV, D.A.

Automatic measurement of strip elongation in temper mill rolling.
Stal' 24 no.12:1104-1106 D '64. (MIRA 18;2)

1. Tsentral'naya laboratoriya avtomatiki.

INDUKAYEV, D.P., assistant; MAYGOV, V.Ya.; ZAREZENKO, A.N.

Fluorescent car lighting. Zhel. dor. transp. 41 no.10:33-36 0 '59.
(MIRA 13:2)

1.Novosibirskiy institut inzhenerov zheleznodorozhnogo transporta (for Indukayev). 2.Glavnyy inzhener sluzhby vagonnogo khozyaystva Tomskoy dorogi (for Maygov). 3.Zamestitel' nachal'nika passazhirskogo vagonnogo depo stantsii Novosibirsk.

(Fluorescent lighting) (Railroads--Cars)

OIDAL', Grigorij Mikhaylovich; ZAREZIN, I.V., red.

[Effective use of mooring structures during reconstruction]
Effektivnoe ispol'zovanie prichal'nykh sooruzhenii
pri rekonstruktsii. Moskva, Transport, 1964. 111 p.
(MIRA 18:1)

MERENOV, Igor' Vladimirovich; MESHALOV, G.N., red.; ZAREZIN, I.V.,
red.

[Diving with a self-contained breathing apparatus] Legkovodo-
laznoe delo. Moskva, Transport, 1965. 220 p.
(MIRA 18:4)

NIKEROV, Pavel Stepanovich; ZAREZIN, I.V., red.

[Pneumatic breakwater] Pnevmaticheskii volnolom. Moskva,
Transport, 1965. 135 p. (MIRA 18/3)

TUMM, I.D.; ZAREZIN, I.V., red.

[Safety measures in the operation of marine turbine plants]
Tekhnika bezopasnosti pri ekspluatatsii sudovykh turbin-
nykh ustanovok. Moskva, Transport, 1964. 68 p.
(MIRA 18:4)

YEL'TSOV, S.P.; NOVIKOV, T.N.; ZAREZIN, I.V., red.

[Handbook on safety measures in the merchant marine;
general considerations] Spravochnik po okhrane truda
na morskem transporte; obshchie polozheniya. Moskva,
Transport, 1965. 466 p. (MIRA 18:5)

SHUBINSKIY Aleksandr Iosifovich; KABANOV, Yurii Nikolayevich;
ANDREYEVA, L.S., red.; ZAREZIN, I.V., red.

[Electrician in harbor mechanization] Elektromonter
portovoi mekhanizatsii. Moskva, Transport, 1965. 183 p.
(MIRA 18:9)

DONSKOY, Moisey Isaakovich; KOMAROV, Arkadiy Aleksandrovich;
TAIROV, Rostislav Nikolayevich; SHMELEV, Sergey
Pavlovich; ZAREZIN, P.V., red.

[Propagation of safe working methods] Opyt propagandy
bezopasnykh metodov truda. Moskva, Transport, 1964.
73 p. (MIRA 18:4)

ZAREZINA, A.P.

On erythrocyte sedimentation reaction. Klin.med., Moskva 29 no.3:88
Mar 51. (CLML 20:7)

1. Of the Laboratory (Head--A.P. Zarezina) of the Third Amalgamated
Municipal Hospital of Ivanovo (Head Physician--A.S. Barvinskiy).

ZAREZKINA A. K.

ZAREZKINA, A. K.

Chaykin, P. I., Gumbor, K. K., Zarezkina, A. K.

"Simplified Separation of Radium Isotopes from Samples up to 3 g" p. 50

"Separation of Radium Isotopes from Samples from 3 to 20 g" p. 51

in book Methods of Determining Radioactive Elements in Mineral Raw Materials,
1958, 68 pp

MALINOVSKIY, N.N.; ZARGARLI, F.I.; MELEKHOV, V.V.

Correction of a long hypoplastic form of coarctation of the descending thoracic and abdominal aorta using a thoracoabdominal shunt. Azerb. med. zhur. 42 no. 7:37-42 Jl '65
(MIRA 19:1)

1. Iz serdechnogo otdeleniya (zav. - doktor med. nauk N.N. Malinovskiy) Nauchno-issledovatel'skogo instituta klinicheskoy i eksperimental'noy khirurgii Ministerstva zdravookhraneniya RSFSR (direktor - deystvitel'nyy chlen AMN SSSR, prof. B.V. Petrovskiy).

ZARGARLI, F. I., CAND MED SCI, "CERTAIN PROBLEMS OF THE CLINIC, DIAGNOSIS, PATHOLOGICAL PHYSIOLOGY AND SURGICAL TREATMENT OF OPEN ARTERIAL FLOW." MOSCOW, 1961. (ACAD MED SCI, USSR). (KL, 3-61, 232).

415

MARKOVSKAYA, G.I. (Moskva); MEYERSON, F.Z. (Moskva); ZARGARLI, F.I. (Moskva);
FEDOSEYEV, A.N. (Moskva)

Gas exchange and hemodynamics in experimental portal hypertension
with ascites. Pat.fiziol.i eksp.terap. 4 no.4:26-32 J1-Ag '60.
(MIRA 14:5)

1. Iz kafedry klinicheskoy i eksperimental'noy fiziologii (zav. -
deystvitel'nyy chlen AMN SSSR prof. V.V.Parin) TSentral'nogo
instituta usovershenstvovaniya vrachey.
(HYPERTENSION) (RESPIRATION) (BLOOD...CIRCULATION)
(ASCITES)

ZARGARLI, F.I.

Clinical picture and diagnosis of patent ductus arteriosus with
tetralogy of Fallot. Pediatrilia 36 no.7:19-22 Je '58 (MIRA 11:7)

1. Iz gospital'noy khirurgicheskoy kliniki (dir. - deyatel'nyy
chlen AMN SSSR prof. B.V.Petrovskiy) lechebnogo fakul'teta I-go
Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

(DUCTUS ARTERIOSUS, PATENT, compl.)

teratology of Fallot, clin. manifest. & diag. (Rus)

(TETRALOGY OF FALLOT,

patent ductus arteriosus, clin. manifest. & diag. (Rus))

ZARGARLI, F.I.; MAYROVA, L.A. (Moskva)

Diagnosis of isolated patent ductus arteriosus. Klin.med. 37 no.11:
88-91 N '59. (MIRA 13:3)

1. Iz kafedry gospital'noy khirurgii imeni A.V. Martynova (direktor -
deystvitel'nyy chlen AMN SSSR prof. B.V. Petrovskiy) I Moskovskogo
ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
(DUCTUS ARTERIOSUS diagnosis)

PETROVSKIY, Boris Vasil'yevich, prof.; KESHISHEVA, Anzhelina Aramovna. Prinimal uchastiye ZARGARLI, F.I.; MALINOVSKIY, N.N., red.; MATVEYEVA, M.M., tekhn. red.; CHULKOV, I.P., tekhn. red.

[Surgical treatment of patent ductus arteriosus] Khirurgicheskoe lechenie otkrytogo arterial'nogo protoka. Moskva, Medgiz, 1963. 249 p. (MIRA 16:12)

1. Deystvitel'nyy chlen AMN SSSR (for Petrovskiy).
(DUCTUS ARTERIOSUS—SURGERY)

ZARGARLI, F.I. (Moskva)

Peptic ulcer in young people. Klin.med. 34 no.4:35-38 Ap '56.
(MLRA 10:1)

1. Iz gospital'noy khirurgicheskoy kliniki imeni prof. A.V.Martynova
(dir. - prof. V.E.Salishchev) I Moskovskogo ordena Lenina meditein-
skogo instituta.

(PEPTIC ULCER, case reports,
in adolescents & young adults (Rus))
(ADOLESCENCE, diseases,
peptic ulcer (Rus))

ZARGARLI, F.I. (Moskva, Zubovskiy bul'var, d.37, kom.63); GEEEL', G.Ya.;
KISELEV, A.A.

Effect of a model of patent ductus arteriosus on the circulation
in a dog. Grud. khir. 1 no.4:26-31 Jl-Ag '59. (MIRA 15:3)

1. Iz kliniki gospital'noy khirurgii imeni A.V. Martynova
(dir. - deystvitel'nyy chlen AMN SSSR prof. B.V. Petrovskiy)
I Moskovskogo ordena Lenina meditsinskogo instituta imeni
I.M. Sechenova.

(DUCTUS ARTERIOSUS)

(BLOOD--CIRCULATION)

ZARGARLI, F.I. (Moskva, Domnikovskaya ul., d.38a, kv.20)

Minute cardiac volume and the quantities of shunted and circulating blood in dogs with a permanent artificial patent ductus arteriosus. Grud. khir. 2 no.1:48-52 Ja-F '60.

(MIRA 15:3)

1. Iz kafedry gospital'noy khirurgii imeni A.V. Martynova i Moskovskogo ordena Lenina meditsinskogo instituta (zav. - prof. B.V. Petrovskiy).

(BLOOD—VOLUME)
(DUCTUS ARTERIOSUS)

ZARGARLI, F.I. (Moskva, Zh-174, ul. Volodarskogo, d. 26/32, kv.168);
GUSEV, A.I.

Method of retrograde catheterization of the left heart with
cardioangiography and indications for its use. Grud. khir.
6 no.6:37-42 N-D '64. (MIRA 18:7)

1. Gospital'naya khirurgicheskaya klinika (zav. - deystvitel'nyy
chlen AMN SSSR prof. B.V. Petrovskiy) I Moskovskogo ordena Lenina
meditsinskogo instituta im. I.M. Sechenova.

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8

GASANOV, G.T.; MOVSUMOV, A.A.; ZARGARLY, Kh.F.

Cleaning the borehole of drilled-out rocks. Izv. AN Azerb.SSR.
Ser.geol.-geog.nauk no.1:85-90 '65.

(MIRA 18:8)

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963820013-8"

GASANOV, G.T.; MOVSUMOV, A.A.; ZARGARLY, Kh.F.

Transporting capacity of clay mud in drilling. Neft. Khos. 42 no.8:
17-20 Ag '64. (MIRA 17:9)

ALIYEV, M.G.; MOVSUMOV, A.A.; ZARGARLY, Kh.F.

Determining the hydrodynamic pressure on the well wall during hoisting and lowering operations. Burenje no.4:10-12 '65. (MIRA 18:5)

1. Ob"Yedineniye "Dagneft'" i AzNIIburneft'.

TIRIUA, Iuliana, prof.; ZAHAROIU, Felicia, dr.; JUSTIG, I., dr.;
CETERCHI, Nolina, dr.; PAKAI, Eva, dr.; HENDEA, Gh. dr.

Characteristics of ulcerous disease in childhood. *Pediatría*
(Bucur.) 13 no.6:491-499 N-3 '64

1. Lucrare efectuata la Clinica I de pediatrie, Cluj.

L 05692-67 EWT(n)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6022885

SOURCE CODE: UR/0249/65/021/012/0008/0010

AUTHOR: Rustamov, P. G.; Zargarova, I. I.; Geydarova, E. A.39
PORG: Institute of Inorganic and Physical Chemistry (Institut neorganicheskoy i fizicheskoy khimii)TITLE: Solid solutions in the pseudobinary system Ga₂Se₃-Ga₂Te₃

SOURCE: AN AzerbSSR. Doklady, v. 21, no. 12, 1965, 8-10

TOPIC TAGS: gallium compound, selenide, telluride, alloy phase diagram

ABSTRACT: Alloys of the Ga₂Se₃-Ga₂Te₃ system were prepared in evacuated and sealed quartz ampoules; their heating and cooling curves were recorded. The results are shown in Fig. 1. The fusibility curves show that the pseudobinary section Ga₂Se₃-Ga₂Te₃ constitutes a continuous series of solid solutions with a minimum at ~65 mole % Ga₂Te₃ and ~750°C. The microstructure confirms this diagram; the alloys of this system consist of a single phase. The composition-microhardness and density diagrams show a smooth variation of these properties with the composition, indicating the presence of a continuous series of solid solutions in this system. The paper was presented by Academician AN AzerbSSR Nagiyev, M. F. Orig. art. has: 2 figures and 1 table.

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I-05692-67

ACC NR: AP6022885

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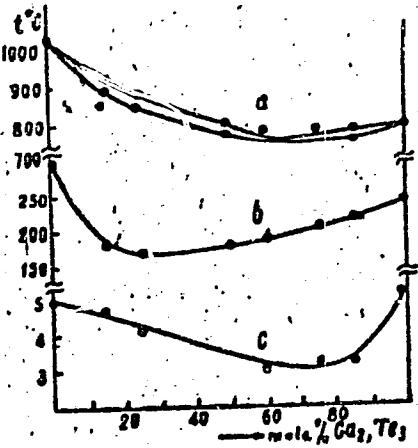


Fig. 1. Phase and composition-property diagrams of the Ga₂Se₃-Ga₂Te₃ system: a-fusibility; b-microhardness, kg/mm²; c-density, g/cm³.

SUB CODE: 11/ SUM DATE: 10Nov64/ ORIG REF: 003

ml
Card

2/2

18.12PO

AUTHORS:

Grigor'yev, A. T., Sokolovskaya, Ye. M., Zargarova, M. I., Maksimova, N. V. 69024
S/078/60/005/04/021/040
B004/B016

TITLE:

Investigation of Alloys of the Palladium - Silver - Chromium System

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 4, pp 894 - 901
(USSR)

ABSTRACT:

The authors briefly refer to data available in publications on the binary systems Pd - Ag, Ag - Cr, and Pd - Cr and in this connection mention Ye. Ya. Rode (Ref 3), V. G. Kuznetsov (Ref 4), V. A. Nemilov et al. (Ref 5), and A. T. Grigor'yev et al. (Ref 7). To investigate the phase diagram of the ternary system Pd - Ag - Cr alloys of seven sections were prepared with a palladium content between 20 and 80% increasing by 10% each time. Furthermore, the sections with 35.65 and 75% palladium were investigated. Thermal analysis was made by means of an N. S. Kurnakov recording pyrometer. The results are given in table 1 and illustrated in figure 2. The hardness test was carried out by impressing a steel ball of a diameter of 10 mm with a load of 250 kg into the annealed specimens (Table 2, Fig 3). The microstructure (Figs 4,5) was investigated on samples etched by an alcoholic bromine solution. Electrical resistance at

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Investigation of Alloys of the Palladium - Silver - Chromium System S/078/60/005/04/021/040
B004/B016

25 and 100° was determined by the potentiometric method (Table 1, Fig 6). Therefrom the temperature coefficient of electrical resistance was calculated (Table 1, Fig 7). On the basis of the resultant data the phase diagram (Fig 1) was plotted. The region of decomposition occurring in the Ag - Cr system likewise exists in the ternary system and reaches up to about 42% Pd. The largest part of the diagram consists of a region of mechanical mixing. A eutectic point is assumed to be near the Ag in the Ag - Cr system, which is connected with the eutectic point of the Pd - Cr system by the line of the double eutectic. Part of the diagram in the palladium corner consists of a solid solution resulting from the binary system Pd - Cr and adjoining the system Pd - Ag as a narrow zone. There are 7 figures, 2 tables, and 9 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
Kafedra obshchey khimii (Moscow State University imeni
M. V. Lomonosov, Chair of General Chemistry)

SUBMITTED: January 31, 1959

Card 2/2

ZEFIROV, A.P.; MAKOVETSKAYA, M.A.; ZARGAROVA, M.I.

Present state of lithium technology and its industrial use.
Met. i metalloved. chist. met. no. 2;159-171 '60. (MIRA 13:12)
(Lithium--Metallurgy)

RZA-ZADE, P.F., ZARGAROVA, M.I.; GANF, K.L.

Kurnakovite. Dokl. AN Azerb. SSR 19 no.1:19-21 '63. (MIRA 16:4)

1. Institut khimii AN AzSSR. Predstavлено академиком AN AzSSR M.F.
Nagiyemym.

(Kurnakovite)

RZAZADE, P.F.; ZARGAROVA, M.I.; ALIYEVA, M.G.

Effect of sodium, magnesium, and calcium bromides and iodides
on the solubility of gypsum. Azerb. khim. zhur. no.3:130-134
'65. (MIFRA 19:1)

1. Institut khimii AN AzerSSR.

ZARGARYAN, S.

Mechanized removing of straw from the field. Tekh. v sel'-
khoz. 20 no.7:19-22 Jl '60. (MIRA 13:9)

1. Rostovskiy zavod skokhozyaystvennykh mashin.
(Straw) (Agricultural machinery)

ZARGARYAN, S.R., inzh.; ANDRENKO, G.P., kand.tekhn.nauk

Increasing the efficiency of the separator parts of threshing
machines. Trakt. i sel'khozmash. 33 no.5:24-26 My '63.

(MIRA 16:10)

STROKOV, S.A.; GALADZHEV, R.S.; ZARGARYAN, S.R.; RUBLEV, V.S.

Working out a design of the frame of the SPM-200 stacker.
Trakt. i sel'khozmash. no.1:21-23 Ja '64. (MTRA 17:4)

1. Gosudarstvennoye spetsial'noye konstruktorskoye byuro
Rostovskogo zavoda sel'skokhozyaystvennogo mashinostroyeniya.

ZARGARYAN, Sergey Romanovich

[New agricultural machinery] Novye sel'skokhoziaistvennye mashiny.
Rostov-na-Donu, Rostovskoe knizhnoe izd-vo, 1956. 30 p. (MLRA 10:9)
(Agricultural machinery)

L 7912-66 ENT(m)/ETC/ENG(m)/T/EMP(t)/EMP(b)/EMA(c) IJP(c) RDH/JD/JG
ACC NR: AP5025779 SOURCE CODE: UR/0363/65/001/009/1462/1467

AUTHOR: Abrikosov, N. Kh.; Zargaryan, V. Sh.

ORG: Institute of Metallurgy im. A. A. Baykova (Institut metallurgii)

TITLE: Alloys and phase diagram of neodymium-tellurium systems

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1965,
1462-1467

TOPIC TAGS: neodymium alloy, tellurium alloy, phase diagram

ABSTRACT: The materials investigated were synthesized from neodymium and tellurium, the impurities in which did not exceed 0.5 and 0.06%, respectively. The synthesis was carried out in two section quartz ampoules. One section was filled with finely ground metallic neodymium and the other with tellurium. This prevented direct contact of the reagents which could cause an explosion. After evacuation to 10^{-4} mm Hg, the ampoule was sealed and placed in a horizontal tube furnace with two heating zones. The ampoule was rotated inside the furnace

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UDC:541.123, 2:546.657'24

L 7912-66

ACC NR: AP5025779

at 25-30 rev/min. The furnace temperature was raised slowly to 700-950 C at a rate of 200 degrees/hour. The zone of the furnace with the section of the ampoule containing the neodymium was at a temperature 100-120 C lower than that containing the part of the ampoule with the tellurium. The ampoule was rotated for 4-5 hours up to complete volatilization of the tellurium. The resulting powder appeared homogeneous; this was confirmed by x-ray analysis. The method permitted synthesis of compositions with up to 75 atom % tellurium. The powder was melted in tantalum crucibles to obtain solid samples for analysis. Solid samples of stoichiometric composition corresponding to the following compounds were obtained: NdTe, Nd₃Te₄, Nd₂Te₃, Nd₄Te₇, NdTe₂, Nd₂Te₅, and NdTe₃. Results of chemical analysis of these neodymium tellurides are shown in a table. The article also describes a method for thermal analysis of the neodymium-tellurium alloys using tungsten rhenium thermocouples; heating was done with a high frequency generator. Based on the results of the thermal analysis and a microstructural analysis, a diagram of state is constructed for the neodymium-tellurium system. Orig. art. has: 2 figures and 4 tables

SUB CODE: IC, MM/ SUBM DATE: 21May65/ ORIG REF: 002/ OTH REF: 005
Card 2/2(A)

ZARGARYAN, Ye.L.

Formation waters in the Karachukhur-Zykh oil field, Geol.
nefti i gaza 3 no.12:31-36 D '59. (MIRA 13:4)

1. TSentral'naya nauchno-issledovatel'skaya laboratoriya
Neftepromyslovogo upravleniya Ordzhonikidzenefti'.
(Karachukhur-Zykh (Apsheron Peninsula)--Oil field brines)

ZARGARYAN, Ye.L.

Enlarging the units of the Kirmaki series in the Surakhany area.
Azerb.neft.khoz. 36 no.7:9-11 Jl '57. (MIRA 10:10)
(Apsheron Peninsula--Petroleum engineering)

9.4310 (1143, 1150, 1160)

33154
S/120/61/000/006/024/041
E039/E485

AUTHORS: Zargar'yants, M.N., Popov, V.S., Taubkin, I.I.

TITLE: An apparatus for measuring the depth of the
p-n transition layer

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1961, 117-120

TEXT: An apparatus is described for determining the depth of the p-n transition layer in semiconductors. The method is based on the exact measurement of the tangent of the angle of slope across a section of the material and the position of the transition layer is determined by the reversal of the thermal emf with respect to a heated probe. Measurements can be made at room temperature and at the temperature of liquid nitrogen. The apparatus is of simple construction; its basic design is shown in the figure. The distance O_1O and the angle α must be measured accurately. The sample is mounted on a slide so that it can be moved horizontally. A microscope is used to determine the position of the probe on the sample and the movement of the slide is measured by means of a micrometer head and a dial indicator. The sample can also be rotated in the vertical plane, so that the angle α can be measured on the same

Card 1/2 2

33154

S/120/61/000/006/024/041
E039/E485

An apparatus for measuring ...

apparatus. Measurements of the thermal emf are made by contacting the sample with a heated copper probe, see figure, and determining the emf produced with a potentiometer. The probe is fixed to the core of an electromagnet which ensures that a constant pressure is always applied to the sample. When the electromagnet is turned off, the probe is raised by a spring, so that the sample will not be scratched when it is moved. The overall accuracy of the measurement is about 4%. By measuring values of the thermal emf, it is possible to use the apparatus to determine the uniformity and other parameters of semiconducting materials. There are 4 figures and 5 references: 1 Soviet-bloc and 4 non-Soviet-bloc. The four references to English language publications read as follows:

- Ref.1: M. Beliveau, Electronics, v.31, no.39, 1958, 98;
Ref.2: R. Glang, J. Electrochem. Soc., v.107, IV, no.4, 1960, 356;
Ref.3: E. Billig, J.J.Dowd, Nature, v.172, 1953, 115;
Ref.4: C.S.Fuller, J.A.Ditzenberger, J. Appl. Phys., v.27, 1956, 544.

SUBMITTED: April 12, 1961

Card 21/ 2

L 2327-66 EWA(k)/FBD/EWT(l)/EEC(k)-2/T/EWP(k)/EWA(m)-2/EWA(h) SCTB/IJP(c) WG
ACCESSION NR: AP5023362 UR/0020/65/164/001/0078/0079

AUTHOR: Zargar'yants, M. N.⁴⁴; Kiselev, A. A.⁴⁴; Kropotova, O. D.⁴⁴ B⁶⁴
Kurbatov, L. N.; Lyustrov, Yu. M.; Sigriyanskiy, V. V.; Taubkin, I. I.;
Shestopalova, I. P.⁴⁴

TITLE: A continuous GaAs injection laser cooled by a flow of gaseous helium

SOURCE: AN SSSR. Doklady, v. 164, no. 1, 1965, 78-79

TOPIC TAGS: laser, injection laser, gallium arsenide, gallium arsenide laser, laser pumping

ABSTRACT: A continuously operating GaAs junction laser cooled by a flow of helium vapor is described. A GaAs laser was mounted on a triangular base. The p-n junction was formed by vapor diffusion of zinc into a wafer of GaAs doped with Te oriented in the (111) plane. The junction area was 0.34×0.4 mm. The cavity was formed by cleaving. The experimental device used to obtain continuous emission is shown in Fig. 1 of the Enclosure. The major element in the device was a cryostat consisting of a double-wall silvered glass tube with

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ACCESSION NR: AP5023362

the air pumped out from the space between the walls. One end of the tube and a heating element were lowered into the helium dewar. The diode at the other end of the tube was cooled by the flow of the helium gas. The advantage of the cooling system was that the diode's thermal regime depended primarily on the thermal characteristics of the helium gas and on the GaAs. When the laser was placed in the liquid helium and operated in the pulsed regime at a repetition rate of 50 pulses per second and at a pulse duration of 7 μ sec, the threshold current density was 1300 amp/cm². Under the same conditions the threshold current density of the laser cooled to ~30K by a flow of helium gas was 230 amp/cm². The laser was also operated continuously at temperatures between 25 and 35K. At ~30K the threshold current density for continuous operation was 360 amp/cm². (The output power was not given for any of the operating regimes). Orig. art. has: 1 formula and 1 figure. [CS]

ASSOCIATION: none

SUBMITTED: 12Feb65

ENCL: 01

SUB CODE: EC

NO REF SOV: 000

OTHER: 004

ATD PRESS: 4107

Card 2 / 3

L 2327-66
ACCESSION NR.: AP5023362

ENCLOSURE: 01

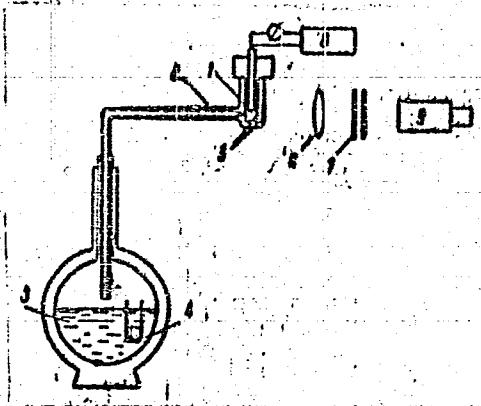


Fig. 1. The experimental setup for continuous operation of the GaAs laser.

- 1 - GaAs diode; 2 - cryostat;
3 - liquid helium; 4 - heating
element; 5 - windows; 6 - lens;
7 - Fabry-Perot interferometer;
8 - battery; 9 - image converter.

Card 3/3 *Bek*